
	Division of Environmental Health and Communicable Disease Prevention	
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## **Mycobacterium Other Than Tuberculosis (MOTT)**

### **Overview**

For a more complete description of Mycobacterium other than Tuberculosis refer to the following texts:

- Control of Communicable Disease Manual (CCDM).
- Red Book, Report of the Committee on Infectious Diseases.

### **Case Definition**

#### ***Clinical Description***

Mycobacterium other than Tuberculosis that may cause human disease but do not cause tuberculosis.

#### ***Diagnostic Criteria of Nontuberculosis Mycobacterium Lung Disease in HIV-Seropositive and Seronegative Hosts.***

The following criteria apply to symptomatic patients with a chest x-ray showing infiltrate, nodular or cavitory disease, or a high resolution computed tomography scan that shows multifocal bronchiectasis and/or multiple small nodules.

- A. If three sputum/bronchial wash results are available from the previous 12 mo:
  1. Three positive cultures with negative AFB smear results or
  2. Two positive cultures and one positive AFB smear
- B. If only one bronchial wash is available:
  1. Positive culture with a 2+, 3+, or 4+ AFB smear or 2+, 3+, or 4+ growth on solid media
- C. If sputum/bronchial wash evaluations are nondiagnostic or another disease cannot be excluded:
  1. Transbronchial or lung biopsy yielding a NTM or
  2. Biopsy showing mycobacterium histopathologic features (granulomatous inflammation and/or AFB) and one or more sputum or bronchial washings are positive for an NTM even in the numbers.

List of common mycobacterium:

*M. avium*, *M. goodii*, *M. fortuitum*, *M. kansasii*, *M. chelonae*


#### ***Case classification***

Confirmed: A clinically compatible illness that is culture confirmed.

#### ***Comments:***

A patient that is positive with a MOTT infection can have a false positive PPD skin tests, since this preparation derived from *M. tuberculosis*, echoes a number of antigens with MOTT species.

***MOTT infection is currently not reportable to CDC through MOHSIS.***

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## **Information needed for Investigation**

Many of these species are ubiquitous and are found in soil, food, water and animals, and are not generally considered to be contagious. Therefore, even though this is a reportable condition an investigation is not required.

## **Case Contact Follow-up and Control Measures**

### **Control Measures**

The only control measures are chemoprophylaxis for certain patients with HIV infection and use of sterile equipment for middle-ear instrumentation, including otoscopic equipment for prevention of Mabscesital otitis media. Sterile medical devices and nosocomial infection of MOTT may include infections of long-term intravenous or peritoneal catheters, post injection abscesses, or surgical wound infections such as those occurring after augmentation mammoplasty or cardiac bypass surgery.


## **Laboratory Procedures**

Laboratory testing for mycobacterium other than tuberculosis (MOTT) is widely available through many private commercial reference laboratories. MOTTs are often isolated when testing for mycobacteria tuberculosis. The state health lab processes MOTTs at the TB State Health Lab in Mount Vernon, MO.

## **Reporting Requirements**

Mycobacterium other than Tuberculosis is a category II disease and should be reported to the local health authority or to the Missouri Department of Health and Senior Services (MODHSS) within three (3) days of first knowledge or suspicion.

1. For all reported cases, complete a "Disease Case Report" (CD-1).
2. Send the completed form to the Regional Health Office.
3. All outbreaks or "suspected" outbreaks must be reported as soon as possible (by phone, fax, or e-mail) to the Regional Communicable Disease Coordinator. This can be accomplished by completing the Missouri Outbreak Surveillance Report (CD-51).
4. Within 90 days of the conclusion of an outbreak, submit the final outbreak report to the Regional Communicable Disease Coordinator.

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## **References**

1. American Academy of Pediatrics. "Disease Caused by Non Tuberculosis Mycobacterium." In: Pickering LK, ed. 2000 Red Book: Report of the committee on Infectious Diseases. 25<sup>th</sup> ed. Elk Grove village, IL. 2000:613-618.
2. Chin, James, ed "Diseases due to Other Mycobacterium." Control of Communicable Disease Manual. 17<sup>th</sup> ed. Washington, DC: American Public Health Association, 2000: 530-532.
3. Center for Disease Control and Prevention. "Non Tuberculosis Mycobacterium"
4. National Jewish Medical and Research Center  
"MEDFACTS – Non Tuberculosis Mycobacterium (NTM)"
5. ATS. "Diagnosis and Treatment of Disease caused by Nontuberculosis Mycobacterium"  
American Journal Respiratory Critical Care Med. Vol. 156 pp. 51-525, 1997

## **Websites**

1. Center for Disease Control and Prevention  
[http://www.cdc.gov/ncidod/dastlr/tb/tb\\_ntm.htm](http://www.cdc.gov/ncidod/dastlr/tb/tb_ntm.htm) (June 03)
2. National Jewish Medical and Research Center  
<http://nationaljewish.org/medfacts/nontuberculosis.html> (June 03)
3. American Thoracic Society [www.thoracic.org/adobe/statements/nontuberc1-27.pdf](http://www.thoracic.org/adobe/statements/nontuberc1-27.pdf) (June 03)

# **Mycobacteria Other Than Tuberculosis (MOTT)**

## **FACT SHEET**

### **What is MOTT?**

Mycobacteria other than tuberculosis are mycobacterial species that may cause human disease but do not cause tuberculosis. Every year in the United States approximately two people per 100,000 population develop infections caused by these lesser-known “cousins” of tuberculosis. In fact, data suggest that there may be rising numbers of cases in certain parts of the country.

### **How is MOTT spread?**

Unlike tuberculosis, which is spread from person to person, MOTT infections are not considered contagious. There is no evidence that the infection can be transmitted from one person to another. Just how and why people become infected with MOTT is not clear.

### **What are the symptoms of MOTT?**

Like tuberculosis, an MOTT infection primarily affects the lungs and the symptoms are similar. Most MOTT infections progress slowly. Symptoms may include:

- Fever
- Weight loss
- Cough
- Lack of appetite
- Night sweats
- Blood in the sputum (phlegm)
- Loss of energy

### **How is MOTT infection diagnosed?**

MOTT infections can be more difficult to diagnose than tuberculosis. It is important for your health care provider to determine if the infection is tuberculosis or MOTT, and if MOTT, which specific type. In addition, it is important for the health care provider to determine whether the MOTT infection requires treatment. Some people harbor the germs and remain well. They may need observation but not specific treatment. Others have or may be developing serious and progressive illness. A diagnosis is generally based on the following:

- Medical history including your symptoms
- Chest X-ray
- Sputum culture – Several sputum cultures are often necessary and must be done at specialized laboratories.
- Other procedures – More complicated diagnostic procedures may be required in certain cases.

### **What is the treatment for MOTT infection?**

Many MOTT infections are benign with no need for treatment. MOTT infections are naturally resistant to conventional antibiotics and it is necessary to use some of the same medications that are used to treat tuberculosis. In order to overcome drug resistance, the physician may be required to administer several different anti-TB medications at the same time. Because many of these medications have side effects, close monitoring is important. Furthermore, treatment may be necessary for as long as two years and sometimes indefinitely depending on the severity of the disease.

**Missouri Department of Health and Senior Services  
Section for Communicable Disease Prevention  
Phone: (866) 628-9891 or (573) 751-6113**



MISSOURI DEPARTMENT OF HEALTH  
**DISEASE CASE REPORT**

REPORT TO LOCAL PUBLIC HEALTH AGENCY

(INSTRUCTIONS ON REVERSE SIDE)

DATE RECEIVED BY LOCAL HEALTH AGENCY

**A. CASE IDENTIFICATION (ALL DISEASES)**

NAME (LAST, FIRST, M.I.)		DATE OF BIRTH (MO/DAY/YR)	AGE	TELEPHONE NUMBER ( )
ADDRESS (STREET OR RFD, CITY, STATE, ZIP CODE)			MEDICAL RECORD NUMBER	GENDER <input type="checkbox"/> M <input type="checkbox"/> F
COUNTY OF RESIDENCE	PATIENT DIED OF THIS ILLNESS <input type="checkbox"/> YES <input type="checkbox"/> NO		PARENT OR GUARDIAN IF A MINOR	
PATIENT EMPLOYED? <input type="checkbox"/> YES <input type="checkbox"/> NO	SCHOOL/DAY CARE/WORKPLACE AND OCCUPATION			ETHNIC ORIGIN <input type="checkbox"/> HISPANIC <input type="checkbox"/> NOT HISPANIC
RACE <input type="checkbox"/> BLACK <input type="checkbox"/> ASIAN/PACIFIC ISLANDER <input type="checkbox"/> MIXED <input type="checkbox"/> WHITE <input type="checkbox"/> AMERICAN INDIAN <input type="checkbox"/> OTHER (SPECIFY) _____		PATIENT'S COUNTRY OF ORIGIN		DATE ARRIVED IN U.S.A.
WAS PATIENT HOSPITALIZED? <input type="checkbox"/> YES <input type="checkbox"/> NO	ARRIVED BY AMBULANCE? <input type="checkbox"/> YES <input type="checkbox"/> NO	OTHER CASES? <input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> UNKNOWN		
RESIDE IN NURSING HOME? <input type="checkbox"/> YES <input type="checkbox"/> NO	NOSOCOMIAL INFECTION? <input type="checkbox"/> YES <input type="checkbox"/> NO			
NAME OF HOSPITAL/NURSING HOME		ADDRESS		

**B. PERSON OR AGENCY REPORTING**

NAME		DATE OF REPORT (MO/DAY/YR)	TELEPHONE NUMBER ( )
ADDRESS		<input type="checkbox"/> PHYSICIAN <input type="checkbox"/> OUTPATIENT CLINIC <input type="checkbox"/> LABORATORY <input type="checkbox"/> HOSPITAL <input type="checkbox"/> PUBLIC HEALTH CLINIC <input type="checkbox"/> SCHOOL	
ATTENDING PHYSICIAN NAME	ADDRESS	TELEPHONE NUMBER ( )	

**C. DISEASE**

DISEASE	PLEASE INCLUDE CONFIRMATORY LABORATORY DATA (ATTACH COPY IF AVAILABLE)		
	DATES	TYPE OF TEST	RESULT
			LAB NAME/LOCATION
DATE OF ONSET (MO/DAY/YR)	DATE OF DIAGNOSIS (MO/DAY/YR)	LEAD <input type="checkbox"/> VENOUS <input type="checkbox"/> CAP	COMMENTS

**PLEASE COMPLETE THE APPROPRIATE SECTION FOR THE DISEASE BEING REPORTED**

SEXUALLY TRANSMITTED DISEASES	<b>D. SYPHILIS</b>	<input type="checkbox"/> <b>GONORRHEA</b> <input type="checkbox"/> <b>CHLAMYDIA</b> (CHECK ABOVE BOXES AS APPROPRIATE)	DATE	TEST	RESULTS	HAS PATIENT BEEN TREATED? <input type="checkbox"/> YES <input type="checkbox"/> NO
	<input type="checkbox"/> PRIMARY (CHANCER PRESENT) <input type="checkbox"/> SECONDARY (SKIN LESIONS, RASH, ETC.) <input type="checkbox"/> EARLY LATENT (ASYMPTOMATIC, LESS THAN 1 YEAR) <input type="checkbox"/> LATE LATENT (OVER 1 YEAR DURATION) <input type="checkbox"/> NEUROSYPHILIS <input type="checkbox"/> CARDIOVASCULAR <input type="checkbox"/> CONGENITAL <input type="checkbox"/> OTHER	<input type="checkbox"/> ASYMPTOMATIC <input type="checkbox"/> UNCOMPLICATED UROGENITAL (URETHRITIS, CERVICITIS) <input type="checkbox"/> SALPINGITIS (PID) <input type="checkbox"/> OPHTHALMIA/CONJUNCTIVITIS <input type="checkbox"/> OTHER (ARTHRITIS, SKIN LESIONS, ETC.)				DATE(S) OF TREATMENT
			TREATMENT NOT INDICATED BECAUSE: <input type="checkbox"/> PREVIOUS ADEQ. TREATMENT <input type="checkbox"/> FALSE POSITIVE DATE OF PREVIOUS TREATMENT: _____ PREV. DISEASE/STAGE _____ PLACE: _____			TYPE AND AMOUNT OF TREATMENT

ENTERIC DISEASES OR HEPATITIS	<b>E. ENTERIC AND PARASITIC DISEASES AND HEPATITIS A</b>		TREATMENT	<b>F. HEPATITIS</b> <input type="checkbox"/> A <input type="checkbox"/> B <input type="checkbox"/> C <input type="checkbox"/> PRENATAL <input type="checkbox"/> OTHER			
	CHECK BELOW IF PATIENT OR MEMBER OF PATIENT'S HOUSEHOLD (HHLD):	PATIENT YES NO UNK	HHLD MEMBER YES NO UNK	DRUG	(CHECK ALL TESTS PERFORMED)		
	IS A FOOD HANDLER			DOSAGE	JAUNDICED: <input type="checkbox"/> YES <input type="checkbox"/> NO	TEST	POS NEG
	ATTENDS OR WORKS AT A DAY CARE CENTER				JAUNDICE ONSET DATE: _____	HAV-IgM	
	IS A HEALTH CARE WORKER			<input type="checkbox"/> NO TREATMENT	CARRIER? <input type="checkbox"/> YES <input type="checkbox"/> NO	HBsAg	
					ALT	AST	HBsAb
							HBcAb
							Hep C

TUBERCULOSIS	<b>G. <input type="checkbox"/> DISEASE OR <input type="checkbox"/> INFECTION</b>	X-RAY <input type="checkbox"/> NORMAL (DATE) _____ <input type="checkbox"/> ABNORMAL (DATE) _____	BACTERIOLOGY	TREATMENT	DOSAGE
	TUBERCULIN TEST (DATE)	(CHECK ONE) <input type="checkbox"/> STABLE <input type="checkbox"/> CAVITARY <input type="checkbox"/> WORSENING <input type="checkbox"/> NONCAVITARY <input type="checkbox"/> IMPROVING <input type="checkbox"/> NOT DONE <input type="checkbox"/> UNKNOWN	TYPE OF SPECIMEN	<input type="checkbox"/> ISONIAZID	
	RESULTS (MM INDURATION)		SMEAR (DATE) _____ POS NEG PEND-ING CULTURE (DATE) _____ POS NEG PEND-ING	<input type="checkbox"/> ETHAMBUTOL	
	TYPE OF TEST (CHECK ONE) <input type="checkbox"/> MANTOUX (5TU-PPD) <input type="checkbox"/> MULTIPLE PUNCTURE DEVICE <input type="checkbox"/> NOT DONE	PREVIOUS TB DISEASE <input type="checkbox"/> YES <input type="checkbox"/> NO <input type="checkbox"/> UNK	REPORT DATE <input type="checkbox"/> NOT STATED OR UNKNOWN <input type="checkbox"/> NOT DONE IF CULTURE POSITIVE: <input type="checkbox"/> M. TUBERCULOSIS <input type="checkbox"/> ATYPICAL MYCOBACTERIA (SPECIFY) _____	<input type="checkbox"/> PYRAZINAMIDE	
				<input type="checkbox"/> RIFAMPIN	
				<input type="checkbox"/> OTHER (SPECIFY) _____	
				DATE TREATMENT STARTED	